

Equine Science & Technology – Year Course

Levels: Grades 9-12
Units of Credit: Year (1.0)
CIP Code: 020221
Prerequisite: None

COURSE DESCRIPTION

Students will be exposed to equine science and technology principles which include genetics, anatomy, physiology/nutrition, diseases, pests, and management practices. The scientific processes of observation, measurement, hypothesizing, data gathering, interpretation, analysis, and application are stressed. Career opportunities and educational preparation are examined. Learning activities are varied, with classroom, laboratory, and field experiences emphasized.

CORE STANDARDS, OBJECTIVES, AND INDICATORS

STANDARD

020221-01 Students will develop an understanding of the role of FFA in Agricultural Education Programs.

OBJECTIVES

- 020221-0101 Students will understand the history and organization of FFA.
- Students will explain how, when, and why the FFA was organized.
 - Students will explain the mission and strategies, colors, motto, parts of the emblem, and the organizational structure of the FFA.
 - Students will recite and explain the meaning of the FFA Creed.
 - Students will explain the purpose of a Program of Activities and its committee structure.
- 020221-0102 Students will discover opportunities in FFA.
- Students will describe how the FFA develops leadership skills, personal growth, and career success.
 - Students will identify major state and national activities available to FFA members.
- 020221-0103 Students will determine FFA degrees, awards, and Career Development Events.
- Students will explain the FFA degree areas.
 - Students will identify the FFA proficiency awards.
 - Students will explain various team and individual Career Development Events.

STANDARD

020221-02 Students will understand the benefits of a Supervised Agricultural Experience (SAE) Program.

OBJECTIVES

- 020221-0201 Students will determine the benefits of an SAE.
- Students will explain the importance of goals and career ladders.
 - Students will define supervised horticultural/agricultural experience.
 - Students will explain the benefits of supervised horticultural/agricultural experience programs.

- 020221-0202 Students will determine the kinds of SAE programs.
- Students will explain the difference between entrepreneurship and placement SAE's.
 - Students will describe research/experimentation and exploratory SAE's.
 - Students will explain the characteristics of a good SAE program and student responsibilities that are involved.
- 020221-0203 Students will research possible SAE programs.
- Students will identify career interest areas in agriculture.
 - Students will identify skills needed for career success.
 - Students will explain opportunities for SAE programs.
- 020221-0204 Students will plan an SAE program.
- Student will identify the steps in planning an SAE program.
 - Student will identify the parts of an annual SAE program plan.
 - Student will discuss the function of a training plan and/or agreement in an SAE program.
- 020221-0205 Students will implement SAE programs.
- Students will discuss the importance of keeping records on an SAE program.
 - Students will explain the types of financial records needed to support a chosen SAE program.
 - Students will identify standards to follow in keeping records on an SAE program.

STANDARD

020221-03 Students will study career opportunities in equine science.

OBJECTIVES

- 020221-0301 Students will identify career opportunities in the equine science industry.
- 020221-0302 Students will use available handbooks, career information, and computerized career information delivery systems to aid career exploration or to formulate tentative career choices.
- 020221-0303 Students will match interests and aptitudes to an occupational area.
- 020221-0304 Students will develop goals related to future employment.
- 020221-0305 Students will obtain education needed for a job.
- 020221-0306 Students will identify occupational competencies.
- 020221-0307 Students will interview prospective employers.

STANDARD

020221-04 Students will understand the history of the modern horse and the development of horse breeds, types, and classes.

OBJECTIVES

- 020221-0401 Students will describe the development of modern horses.
- 020221-0402 Students will discuss the domestication of the horse.
- 020221-0403 Students will identify historical trends of human utilization of horses.
- 020221-0404 Students will describe the current horse industry.
- 020221-0405 Students will describe the gaits and movements of horses.
- 020221-0406 Students will classify and describe equine as pony, light, draft, and long-eared.
- 020221-0407 Students will list and describe equine breeds and their origins.

STANDARD

020221-05 Students will analyze equine anatomy and physiology.

OBJECTIVES

- 020221-0501 Students will identify the external parts of the horse.
- 020221-0502 Students will explore equine bodily systems.
- 020221-0503 Students will describe the skeletal and muscular systems of the horse.
- 020221-0504 Students will describe the digestive system of the horse.
- 020221-0505 Students will describe the reproductive systems of the horse.

STANDARD

020221-06 Students will learn about equine nutrition and feeding management.

OBJECTIVES

- 020221-0601 Students will list and discuss basic nutrients.
- 020221-0602 Students will identify feeds important to horses.
- 020221-0603 Students will balance an equine ration.
- 020221-0604 Students will list and describe equine nutritional disorders.

STANDARD

020221-07 Students will explore concepts in equine health management.

OBJECTIVES

- 020221-0701 Students will list, identify, and describe equine diseases.
- 020221-0702 Students will identify horse internal and external parasites.
- 020221-0703 Students will properly care for hooves and explain hoof anatomy.

- 020221-0704 Students will determine proper horse health management practices.
- Vaccination program
 - Teeth floating and aging
 - Sanitation

STANDARD

020221-08 Students will understand horse genetics.

OBJECTIVES

- 020221-0801 Students will explore the fundamentals of genetics.
- 020221-0802 Students will investigate horse coat color and markings.
- 020221-0803 Students will explain the heritability of performance traits.

STANDARD

020221-09 Students will explore horse reproduction and parturition.

OBJECTIVES

- 020221-0901 Students will describe the physiology of the reproduction tracts of stallions and mares.
- 020221-0902 Students will summarize the estrus cycle and proper times to breed.
- 020221-0903 Students will describe proper horse gestation management.
- 020221-0904 Students will explore equine reproductive technology.
- Artificial insemination
 - Embryo transfer
 - Cloning
- 020221-0905 Students will discuss proper care during pregnancy and parturition.
- 020221-0906 Students will describe the horse condition scoring system.

STANDARD

020221-10 Students will study and utilize equine behavior training.

OBJECTIVES

- 020221-1001 Students will list and discuss horse behavioral categories.
- 020221-1002 Students will demonstrate safe handling of horses.
- 020221-1003 Students will explain imprinting.
- 020221-1004 Students will identify abnormal horse behavior (vices).
- 020221-1005 Students will discuss how to load and haul a horse and how to check the safety of a trailer.

STANDARD

020221-11 Students will learn about equine facilities and equipment.

OBJECTIVES

020221-1101 Students will identify, discuss, and describe the usage of Western and English tack.

020221-1102 Students will outline the transportation of horses.

020221-1103 Students will investigate horse facilities and fencing.

020221-1104 Students will discuss waste management.

STANDARD

020221-12 Students will know how to evaluate and select a horse.

OBJECTIVES

020221-1201 Students will summarize the considerations of purchasing a horse.

020221-1202 Students will recognize the ideal horse conformation characteristics.

020221-1203 Students will recognize conformation faults and predict potential unsoundness and/or lameness.

020221-1204 Students will present oral and written reasons in horse evaluation.